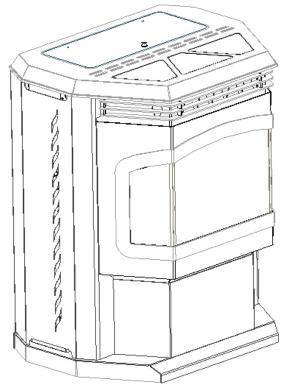
### **Installation & Operating Manual**

### The Harman Advance Pellet Stove





"Ce manuel est disponible en Français sur demande"

**R8** 

### **SAFETY NOTICE**

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW ROOM HEATER. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.

FOR USE IN THE U.S. AND CANADA. SUITABLE FOR INSTALLATION IN MOBILE HOMES

IF THIS HARMAN STOVE IS NOT PROPERLY INSTALLED, A HOUSEFIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW INSTALLATION DIRECTIONS.

CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

CONTACT YOUR LOCAL AUTHORITY (SUCH AS MUNICIPAL BUILDING DEPARTMENT, FIRE DEPARTMENT, FIRE PREVENTION BUREAU, ETC.) TO DETERMINE THE NEED FOR A PERMIT.

CETTE GUIDE D'UTILISATION EST DISPONIBLE EN FRANCAIS. CHEZ VOTRE CONCESSIONNAIRE DE HARMAN STOVE COMPANY.

### SAVE THESE INSTRUCTIONS.

### Introduction

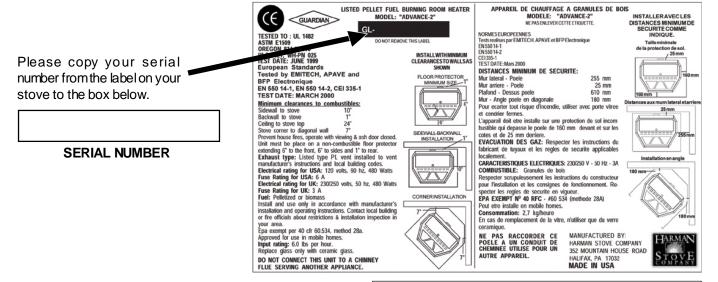
### The Advance Pellet Heater

This heating appliance does not just have automatic ignition, it has total automatic temperature control. The Advance uses a small room sensor rather then a wall thermostat for a more accurate temperature control.

The Advance's control panel is designed for easy and efficient operation. It has 2 automatic modes of operation and 2 manual modes of operation. The Advance's specially designed burn pot and the "Advance Igniter" Automatic Ignition System, allow the unit to burn a large variety of biomass fuels with varying ash content. The Advance feed system has a maximum feed rate of 6 lbs. per hour and a minumum (maintenance) feed rate of 1.0 lbs. per hour.

This 0 to 48,000 BTU pellet stove has an accordian style heat exchanger system that allows maximum surface area for the most efficient heat transfer in a smaller firebox.

The unit has an easy to clean combustion system with an ash pan that holds ash from 1 ton of burned premium pellets. This unit is equipped with several different safety devices which will be explained later in this manual.



SAFETY NOTICE: IF THIS HARMAN ADVANCE PELLET STOVE IS NOT PROPERLY INSTALLED. A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

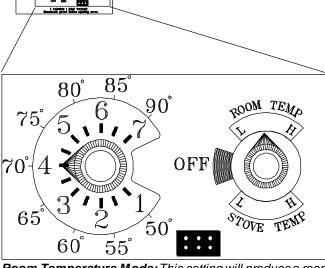
Harman Stove Company 352 Mountain House Road Halifax, PA 17032 sales@harmanstoves.com

**Table of Contents Automatic Operation** 3 **Manual Operation ESP Control** 7 Assembly & Installation Venting 12 Maintenance 19 **Trouble-Shooting** 26 **Specifications** 27 Wiring Diagram 28 **Feeder Parts** 29 **Parts List** 30 **Warranty** 31

### **Automatic Ignition/Operation**

The Advance pellet stove is more than just automatic ignition, it is also automatic temperature control. The automatic system will allow the fire size to be adjusted to match the heating needs and even put the fire out if necessary. If heat is needed after the fire is out, the Advance will automatically re-ignite and adjust the fire size to match the heating need. The totally automatic room sensor mode is recommended because of its efficiency.

The unit can be switched between "AUTO" and "MANUAL" at any time during operation.

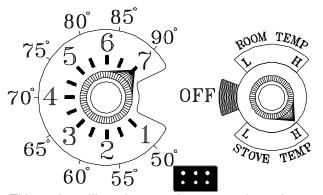


**Room Temperature Mode:** This setting will produce a room temperature of 70 degrees with the distribution blower at medium speed.

**Stove Temperature Mode** 

### 

This setting will produce medium heat with the distribution blower on "low".



This setting will produce continuous maximum heat output with the distribution blower at full speed.

### Igniter switch to "AUTO"

### **Room Temperature Mode**

In "Room Temp Mode" heat output is controlled automatically by the Room Sensing Probe. When the Room Sensing Probe calls for heat, the stove will increase output. When the Room Sensing Probe is getting close to the set temperature, the stove will begin to level off output and keep the fire burning at just the right temperature to maintain that setting.

High output is determined by the feed rate setting. This setting, generally on #4, can be increased if higher burn rates are necessary. The unit's maximum burn rate should not create less than 1" of ash on the burn pot front edge. See Fig.2, Page 4. Overfeeding is not a safety concern, but fuel may be wasted if unburned pellets fall into the ash pan.

In "Room Temp Mode" a constant fuel consumption rate is sacrificed for exact room temperature. Therefore, as it gets colder more pellets will be burned automatically.

The distribution blower speed will vary according to the position of the mode selector pointer, and fire size.

### Igniter switch to "AUTO"

### **Stove Temperature Mode**

This allows for automatic ignition upon start-up only. The unit can then be set at any desired setting. The heat output and fuel consumption will remain constant regardless of room temperature. The unit's maximum feed rate should not create less than 1" of ash on the burn pot front adge. See Fig 2, Page 4.

The unit's low burn or maintenance setting is as low as it will go. It will not go out unless it runs out of fuel or is turned off.

### **Shut-Down Procedure**

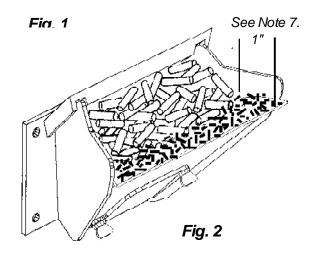
To kill the fire or stop burning the stove, turn the Mode Selector to "OFF". This will cause the fire to diminish and burn out. When the fire burns out and the stove cools down everything will stop.

If you pull the plug to shut down the stove, all motors will stop. This may cause incomplete combustion and smoke in the firebox. If the load door is opened the smoke may escape.

The best way to shut down the stove is simply let it run out of pellets, then the stove will shut down automatically.

### **Automatic Start Up**





- 1. Fines are small pieces of broken pellets (sawdust). Fines do not flow easily and often build up on the hopper funnel bottom angles. These fines can be pushed into the feeder opening and then fill the hopper with pellets. As the system works, they will be burned. 2. The "TEST" cycle will operate the feeder motor for exactly one minute. Turning to "TEST" again and again may purge too much fuel into the burn pot causing excessive smoke on start-up.
- 3. The firebox low pressure switch will not allow the auger motor or the igniter element to operate if the view door or the ash pan door are open.
- 4. Adjust Feed Rate. If this is your first fire or you are trying different pellets, set the feed adjuster to #4, Fig. 1. This is a conservative number and will probably need to be increased. After you know a feed rate setting that works well, use that setting. Remember, if your feed rate is too high you may waste fuel.
- 5. This is usually a weekly maintence procedure. Cleaning the burn pot with the scraper with a small amount of new fuel in the bottom is not a problem. First, scrape the ashes on the front of the burn pot into the ash pan. Then scrape the holed surface downward into the burn pot. When the stove is ignited these scrapings will be pushed out by the feeder.
- 6. The ash pan can hold the ashes from approximately 1 ton of premium fuel. This means the ashes will only need to be emptied a few times a year.
- 7. Setting the feed adjuster # for maximum burn: With the unit burning in "AUTO", turn to "Stove Mode" and put the fan on "H". Set the Temperature Dial to #7. Allow the unit to burn for about 30 minutes and check ash on front of burn pot. Fig. 2. If the ash line is larger than 1", turn the feed adjuster from #4 to #5. Allow another 30 minutes of burn time and check again. If , at #6 setting, a 1" or less ash bed is not obtainable, it is not a problem. The 1" ash bed is only a maximum burn rate and at most normal settings the ash bed will be larger.

### Starting First Fire

### Igniter Switch to "AUTO" (up position)

Make sure the unit is plugged into a 120 VAC, 60 HZ electrical source. The power light should be the only light lit.

- 1. Turn Mode Selector to "OFF".
- 2. Fill hopper with pellets.1
- 3. Clean burn pot with scraper, if necessary.5
- 4. If starting after an empty hopper, turn Feed Adjuster to "TEST" (for one 60 second cycle).<sup>2</sup> This will purge pellets into the auger tube and also allow you to check the motors for operation. NOTE: The auger motor will not operate with the view door or ash pan door open.<sup>3</sup>
- 5. Turn Feed Adjuster to #4.4
- 6. Flip the Igniter Switch up into the "AUTO" position.
- 7. **Turn the Temperature Dial** to desired room temperature.
- 8. **Turn Mode Selector** to Room Temperature or Stove Temperature.
- 9. **Fill hopper** with pellets and **remove ashes** as required.<sup>6</sup>

### **Battery Back Up**

If a power outage is expected, switch the toggle switch to Manual Mode. The Harman 502H Battery Back Up is incapable of powering the igniter. If an automatic ignition is attempted while the stove is being powered by the battery back up, it may cause damage to both the stove and the battery back up unit.

### **CAUTION**

The stove is hot while in operation. Keep children, clothing and furniture away. Contact may cause skin burns.

### Warning

"NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IN USE".

### **Manual Ignition/Operation**

The Advance Pellet Stove is capable of manual operation. This also allows the operator to manually control operation during an emergency (i.e. igniter failure, when using a 502H battery backup, or when using certain generators.) The unit can be switched between "AUTO" and "MANUAL" at any time during operation. 85 80 OFF

Room Temperature Mode: This setting will produce a room temperature of 70 degrees with the distribution blower atmedium speed.

### **Manual Stove Temperature Mode** POWER () STATUS () DISTRIBUTION () BLOWER COMBUSTION () BLOWER **AUTO** FEED () MOTOR IGNITER ( IGNITER () MANUAL TEMA ( WARNING ) HIGH VOLTAGE Disconnect power before opening cover.

This setting will produce a large viewing fire without a distribution blower operating.

NOTE: When starting the unit in the "AUTO" mode and switching to "MANUAL", the fire must be large enough to start the distribution blower. The starting of the blower is a signal that the start cycle is completed and the fire will not go out.

### Igniter Switch to "MANUAL"

### **Room Temperature Mode**

The fire will have to be lit with starting gel and a match, or started automatically, see "Automatic Operation". Turn to "Manual" position when the fire is established.

The difference between "AUTO" Room Temperature Mode and "Manual" Room Temperature Mode is that the fire will not go out as the room temperature goes above the control board setting. The unit can only go to low burn and will remain there until it runs out of fuel or until more heat is needed and the feed rate increases. Feed rate adjustments and dial settings are the same as "AUTO" settings.

### Igniter Switch to "MANUAL"

### **Stove Temperature Mode**

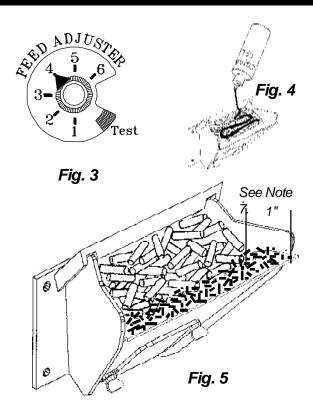
The advantage of this mode is to allow the operator to have a large viewing fire without blowing extra heat into the room.

During operation, with the temperature dial set at #5 or less, the distribution fan will not operate. A #5 on the temperature dial and a #5 on the feed adjuster is approximately 80% output. It is not necessary to operate the distribution blower below this point. Therefore, there can be a higher feed rate (a larger viewing fire) without an excess of hot air blowing into the room.

An example of when to use the Manual Stove Temperature Mode is if you want to watch a large fire and the room is aleady up to temperature. The Stove Temperature Mode allows you to have a larger fire and a lower sound level, without the distribution blower.

NOTE: During the use of this mode, if you keep increasing the temperature dial setting to increase the fire size, the distribution blower will automatically come on when the ESP Temperature reaches 350° F, or 81% output.

### **Manual Start Up**



- 1. Fines are small pieces of broken pellets (sawdust). Fines do not flow easily and often build up on the hopper funnel bottom angles. These fines can be pushed into the feeder opening and then fill the hopper with pellets. As the system works, they will be burned. 2. The "TEST" cycle will operate the feeder motor for exactly one minute. Turning to "TEST" again and again may purge too much fuel into the burn pot causing excessive smoke on start-up.
- 3. The firebox low pressure switch will not allow the auger motor or the igniter element to operate if the view door or the ash pan door are open.
- 4. Adjust Feed Rate. If this is your first fire or you are trying different pellets, set the feed adjuster to #4, Fig. 3. This is a conservative number and will probably need to be increased. After you know a feed rate setting that works well, use that setting. Remember, if your feed rate is too high you may waste fuel.
- 5. This is usually a weekly maintence procedure. Cleaning the burn pot with the scraper with a small amount of new fuel in the bottom is not a problem. First, scrape the ashes on the front of the burn pot into the ash pan. Then scrape the holed surface downward into the burn pot. When the stove is ignited these scrapings will be pushed out by the feeder.
- 6. The ash pan can hold the ashes from approximately 1 ton of premium fuel. This means the ashes will only need to be emptied a few times a year.
- 7. Setting the feed adjuster # for maximum burn: With the unit burning in "AUTO", turn to "Stove Mode" and put the fan on "H". Set the Temperature Dial to #7. Allow the unit to burn for about 30 minutes and check ash on front of burn pot. Fig. 5. If the ash line is larger than 1", turn the feed adjuster from #4 to #5. Allow another 30 minutes of burn time and check again. If , at #6 setting, a 1" or less ash bed is not obtainable, it is not a problem. The 1" ash bed is only a maximum burn rate and at most normal settings the ash bed will be larger.

### **Starting First Fire**

### Igniter Switch to "MANUAL"

### (down position)

Make sure the unit is plugged into a 120 VAC, 60 HZ electrical source. The power light should be the only light lit.

- **1. Turn FEED ADJUSTER to desired feed rate.** No. 4 is good for most pellets.<sup>4</sup>
- 2. Turn the MODE SELECTOR to "OFF" and then to the desired mode. This will reset control and start the combustion motor.
- 3. Turn the TEMPERATURE DIAL to the desired setting.
- 4. Clean burn pot with scraper if necessary.5
- 5. Fill burn pot with pellets, only level with front edge. (Do Not Over Fill).
- Add starting gel on top of the pellets. Stir gel into pellets for fast lighting.
- 7. Light starting gel with a match, and close the door. Operation will begin when the fire reaches the proper temperature.<sup>3</sup>
- 8. Fill hopper with pellets and remove ashes as required.<sup>1, 6</sup>

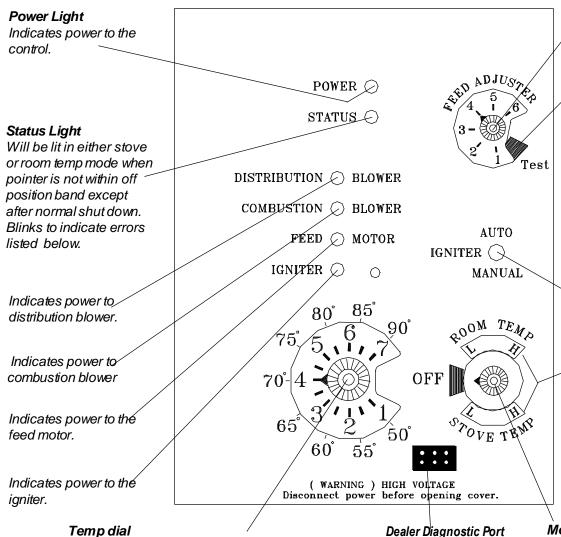
### **CAUTION**

The stove is hot while in operation. Keep children, clothing and furniture away. Contact may cause skin burns.

### Warning

"NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE IN USE".

### **ESP Control**



Feed adjuster

Sets the maximum feed rate

### Test

Runs all motors at full speed for one minute to check operation. After two minutes the stove will go to minimum burn and the blowers will alternate from high to low every minute to remind you that you are still in "Test Mode".

### Igniter switch

Set to appropriate Start-Up mode.

Distribution Blower speed adjustment range.

L = low

H = high

Variable speed anywhere between L and H; although as the stove temp. goes up , so does the lowend of the scale.

### Mode Selector

For dealer maintenance only.

Requires special DDM monitor

supplied to Harman Dealers

exclusively.

Allows you to choose between Room Temp Mode, Stove Temp Mode, or OFF. Also allows you to vary the distribution blower speed by turning the knob to the high or low side of each mode.

Allows you to adjust the room temperature in Room Temp Mode using the outer scale marked in degrees Fahrenheit. It also allows you to adjust the stove temperature while in Stove Temp Mode using the inner scale marked from 1 to 7.

### Status light error messages:

- This requires a manual reset\*.
- 3 Blinks: Indicates ESP (Exhaust Sensing Probe) fail- utes. See Troubleshooting section for more details. ure. This requires a manual reset\*.
- 4 Blinks: Can occur only in Room Temp Mode and indicates Room Sensing Probe failed or not installed. If a Room Sensing Probe is then installed, the status light will automatically reset.

NOTE: Unit will not start in "AUTO" with this status error. 5 Blinks (In Igniter Auto, Mode Only): Indicates that the unit has failed to light after 4 consecutive igniter cycles, 32 minutes total. To reset - Turn Mode Selector to "OFF", then turn to either mode again.)

1 Blink: Indicates control board self diagnostic failure. 6 Blinks: Indicates that the control has calculated poor or incomplete combustion occurring for more than 50 min-

> A six blink status may be set if the stove is allowed to run out of pellets. To reset, turn mode selector to "OFF" then back on to the desired mode. If the unit was not out of pellets, see Troubleshooting section for more details.

- \* Manual reset- disconnect power cord for a few seconds and reconnect. If error still occurs call your Dealer.
- NOTICE: When power is given to the stove, the control board will blink a few times to indicate current version of control board. This should not be confused with error messages.

### Installation

When installing and operating your Harman Advance Pellet Stove, respect basic safety standards. Read these instructions carefully before you attempt to install or operate the Advance. Failure to do so may result in damage to property or personal injury and may void the product warranty.

Consult with your local building code agency and insurance representative before you begin your installation to ensure compliance with local codes, including the need for permits and follow-up inspections.

Several issues must be addressed when selecting a suitable location for your Advance Pellet Stove. Observing required clearances to combustible materials, the proximity to a safe chimney or venting system, and the accessibility of electrical supply must all be considered. In addition, selecting a location that takes advantage of the building's natural air flow is also desirable to maximize the heating effectiveness of the heater. In many cases, this is a central location within the building.

Adequate combustion and ventilation air must be provided.

Place the stove on a noncombustible floor or UL approved floor protector that extends 6 inches to the front, 6 inches to the sides and 1 inch to the rear of the stove. Fig. 8.

Place the stove away from combustible walls at least as far as shown in figures 6, and 7.

Note that the clearances shown are minimum for safety but do not leave much room for access when cleaning or servicing. Please take this into account when placing the stove.

### **Mobile Home Installation**

When installing this stove in a mobile home several requirements must be followed:

- 1. The unit must be bolted to the floor. This can be done with 1/4" lag screws throught the 2 holes in the base plate shown in Fig. 13, Page 9.
- 2. The unit must also be connected for the outside air. See page 12.
- 3. Floor protection and clearances must be followed as shown above.
- 4. Unit must be grounded to the metal frame of the mobile home.

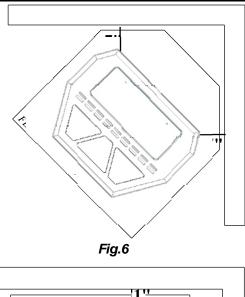
### CAUTION: This appliance must be vented to the outside.

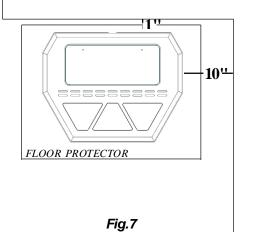
Due to high temperatures, the stove should be placed out of traffic and away from furniture and draperies.

Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burn to skin and/or clothing.

Young children should be carefully supervised when they are in the same room as the stove.

Clothing and other flammable materials should not be placed on or near the stove.





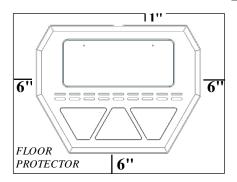


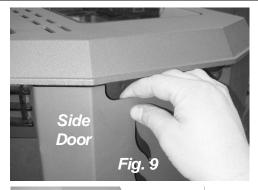
Fig.8

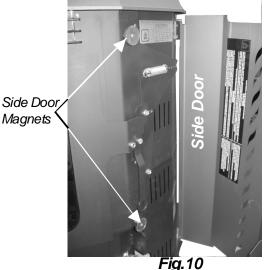
Installation and repair of this stove should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning will be required. It is imperative that control compartments, burners, and circulating air passageways of the stove be kept clean.

### AFTER THE INSTALLATION IS COMPLETED

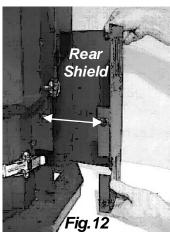
Before the first fire is lit, check and record the high and low draft reading numbers on page 10. Make adjustments to the low draft at this time, if necessary. See page 10.

### **Removing Side Doors for Installation**









Knockout

Rear Shield Retaining clip

Rear
Shield

Fig. 13

Skid Hold Down
Screws

Outside Air
Flex Hole

### **Removing Side Doors**

### Figure 9

Use hand hole to swing open side doors to at least 90°.

### Figure 10

Remove side doors by lifting upward on the door until the bottom pin is out of its hole. Move the bottom of the door out and away from the pedestal base about 1/2". Allow the door to slide downward until the top door pin is out of its top hole.

NOTE: Always remove the side doors and rear shields to move the unit. This will keep them from getting damaged.

### Removing the Rear Motor Shield Sheet Metal.

NOTE: Disconnect power to the unit before removing the motor shields. Danger of electrical shock. Hot and moving parts could cause injury.

### Figure 11

There are (2) #10 hex head screws holding each rear shield. Using a 5/16" nut driver or socket, loosen the (2) screws about 4 or 5 turns.

### Figure 12

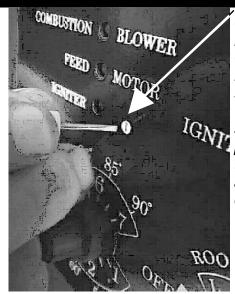
Slide the rear shields straight outward until the ends come out of the rear retaining clips, as seen in Fig.13.

### Placing Rear Shields Back on Unit

- 1. When replacing the shields, always insert the top and bottom ends of the sheet metal into the retaining clips first.
- 2. Slide the shields straight inward until the (2) hex head screws are fully inserted into the stove slots.
- 3. Make sure the top edges of the shield are against the hopper bottom and tighten screws.

Rear Shields are split around the Flue Tail pipe and outside Air Hole Knockout. This will allow removal and installation of the rear shields with the unit completely installed.

### **Low Draft Voltage Adjustment**



### Combustion Motor Speed Control Low draft only set point.

The small straight screwdriver slot is plastic; therefore, the unit can be adjusted while in operation.



Fig. 15: Draft Meter bolt hole location

Fia.14

These units are pre-tested at the factory with exactly 120 Volts A.C., 60 Hz. They are checked and adjusted for firebox tightness, gasket leakage, motor operation and igniter operation. The Advance is then factory set at a mid-point adjustment and in most cases will not need any adjustments. **NOTE: The factory low draft setting may not be correct for the unit's permanent installation conditions.** 

The control board on the Advance is equipped with a low draft adjustment port. Located on the control face just to the right of the igniter light. See Figure 14. This voltage adjustment is provided to allow the unit to be adjusted for the household voltage where the unit is going to be in permanent operation. NOTE: The line voltage varies from area to area and often home to home.

The low draft voltage should be adjusted to achieve the most efficient burn on low burn or "maintenance". This voltage adjustment allows the installer to change the low voltage set point approximately 15 volts. This adjustment should be done by the installer during set up because a draft meter reading is <u>required</u> to insure proper set up.

If the unit is not adjusted properly, it does not cause a safety concern. If the unit is adjusted too high, only effiency is lost. If the unit is adjusted too low, the low draft pressure switch will not allow the feeder motor or the igniter to operate.

A simple draft test should be performed after completing the flue pipe installation. To record the results for future reference:

- 1. Plug unit into a 120VAC, 60 HZ outlet.
- 2. Close the hopper lid, front view door, and the ash pan. Neither pellets or a fire are required for this test.
- 3. With the mode selector in the "OFF" position, turn the feed adjuster to "TEST".
- 4. Record the high draft\_\_\_\_\_in W.C. (Normal is -.50 to -.60) The control will be on the High Draft for a total of 2 minutes.
- 5. After 2 minutes is up, the combustion motor will go down to low draft and the distribution blower will go on high. Allow approximately 15 seconds to pass for the combustion motor to slow before checking the low draft.
- 6. If the low draft is between .35 and .45, record the reading \_\_\_\_\_ in W.C. If the reading is higher, slowly turn the set screw counter-clockwise until the draft lowers. If the reading is lower, <u>very slowly</u> turn the set screw clockwise until the draft increases.

NOTE: The test mode alternates from high to low draft every 60 seconds. If more time is needed for draft adjustment, wait until the next low draft cycle.

NOTE: In some cases, the draft may not go as low as .35 even with the set screw completely counterclockwise.

### **MODIFICATIONS**

**High Altitude** (7,000 - 10,000 ft.)A combustion fan blade change can be made by an authorized Harman Dealer. These changes must be done with the use of a draft meter. These changes affect the low and high burn rate air to fuel ratios.

### **Room Sensor and Air Grill Installation**

## Room Sensor Installation

Fig. 16

The room sensor is a small temperature sensor on the end of a 60" gray wire. This sensor is installed much like a standard wall thermostat. Because it is so small, it can be hidden along the trim of a doorway or even up the leg of a coffee table. There is a remote room sensor port on the rear of the unit for easy external connection. Use standard 18-2 thermostat wire to extend the distance to the desired location (100' maximum). The room sensor should be installed in the location where you want to control the temperature.

NOTE: Distances of more than 25 feet from the unit or in another room are not recommended. It is recommended that the room sensor be installed, even if only installed on the rear of the unit as a return air sensor. The room sensor is essential for the Advance's excellent efficiency.



Fig. 17

Insert the two tail end hooks of the Air Grill Assembly up under the stove top edge. Insert inward until the two center hooks drop into the stove body slots in the front of the unit.

### **REMINDERS**

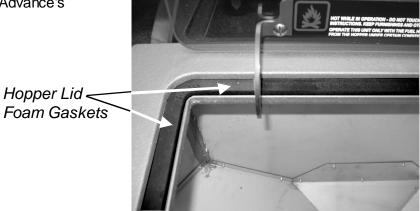
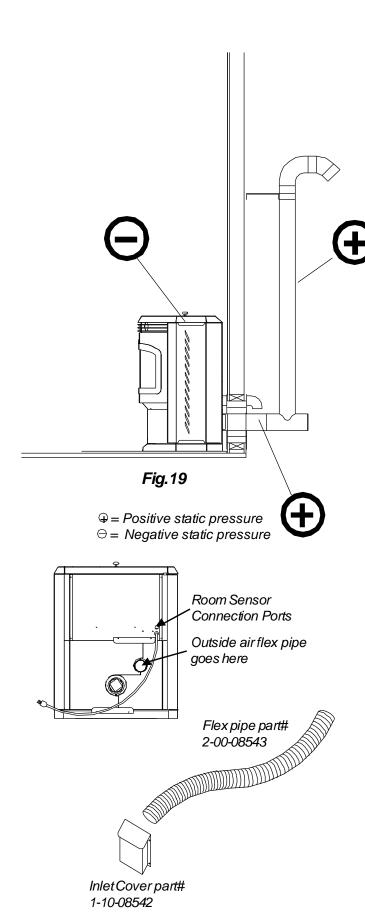


Fig. 18

Do not allow pellets or sawdust to build up on the hopper lid gasket.

Inspect the hopper lid gasket for damage. A good hopper lid seal is very important for proper operation.



A combustion blower is used to extract the combustion gases from the firebox. This causes a negative pressure in the firebox and a positive pressure in the venting system as shown in fig. 19. The longer the vent pipe and more elbows used in the system, the greater the flow resistance. Because of these facts we recommend using as few elbows as possible and 15 feet or less of vent pipe. The maximum horizontal run should not exceed 48". If more than 15 feet of pipe is needed, the diameter should be increased from 3" to 4" because a larger pipe causes less flow resistance. Be sure to use approved pellet vent pipe wall and ceiling pass-through fittings to go through combustible walls and **ceilings.** Be sure to use a starting collar to attach the venting system to the stove. The starting collar must be sealed to the stove with high temp silicone caulking.

### **Vent Pipe**

Pellet venting pipe ( also known as PL vent ) is constructed of two layers with air space between the layers. This air space acts as an insulator and reduces the outside surface temperature to allow a clearance to combustibles of only 3 inches. The sections of pipe lock together to form an air tight seal in most cases; however, in some cases a perfect seal is not achieved. For this reason and the fact that the Advance operates with a positive vent pressure, we specify that the joints also be sealed with clear silicone.

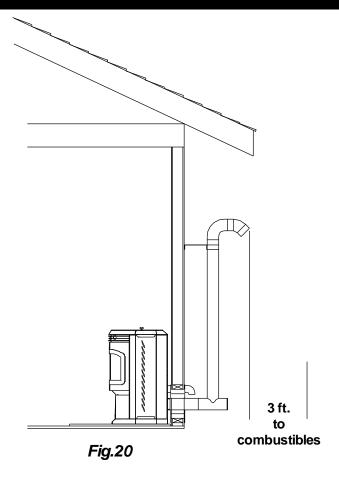
### **Outside Air**

Outside air is optional except in mobile homes and where building codes require. The benefit of outside air is mainly noticed in small, very tight houses.

To install outside air use 2 3/8" I.D. flex pipe part number 2-00-08543. There is a break-away hole on the rear panel which must be removed before connecting the flex pipe. The pipe should be run outside and terminate to the side or below the vent pipe outlet so the flue outlet is more than 12" from the inlet cover. The maximum length run of this pipe is 15 feet. If a longer run is needed, the size must be increased to 3". Inlet cover part number 1-10-08542 should be used to keep birds, rodents, etc. out of pipe.

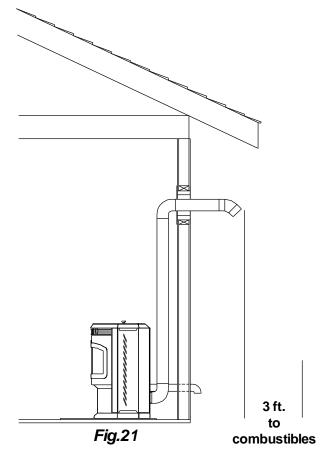
### HRV

When installing in a house with a Heat Reclaiming Ventilation System (HRV) be sure the system is balanced and is not creating a negative pressure in the house.



### **#1 Preferred method**

This method provides excellent venting for normal operation and allows the stove to be installed closest to the wall. One inch from the wall is safe; however, two or three inches allows better access to remove the rear panel. The vertical portion of the vent should be three to five feet high. This vertical section will provide natural draft in the event of a power failure.



### #2 Preferred method

This method also provides excellent venting for normal operation but requires the stove to be installed farther from the wall. The vertical portion of the vent should be three to five feet high and at least three inches from a combustible wall. This vertical section will provide natural draft in the event of a power failure.

### **CAUTION**

KEEP COMBUSTIBLES (SUCH AS GRASS, LEAVES, ETC.) AT LEAST 3 FEET AWAY FROM THE FLUE OUTLET ON THE OUTSIDE OF THE BUILDING

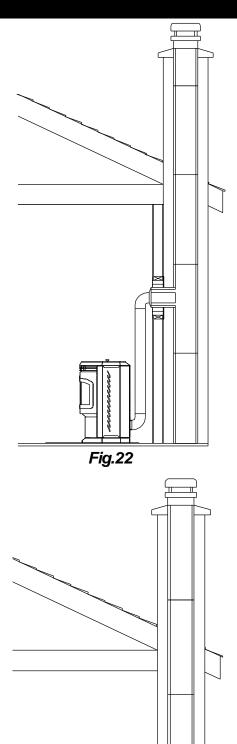


Fig.23

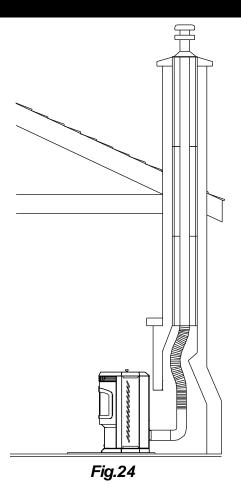
### #3 Installing into an existing chimney ( US only )

This method can be used for normal operation. This method also provides natural draft in the event of a power failure. If the chimney condition is questionable you may want to install a liner as in method #6.

### #4 Installing into an existing fireplace chimney ( US only )

This method can be used for normal operation. This method also provides natural draft in the event of a power failure.

The damper area must be sealed with a steel plate or fiberglass. A cap should be installed on the chimney to keep out rain. If the chimney condition is questionable you may want to install a liner all the way to the top as in Method #5.



### #5 Installing into an existing fireplace chimney ( US and Canada)

This method provides excellent venting for normal operation. This method also provides natural draft in the event of a power failure.

In Canada and some places in the US it is required that the vent pipe extend all the way to the top of the chimney.

In this method a cap should also be installed on the chimney to keep out rain. Be sure to use approved pellet vent pipe fittings. Seal pipe joints with silicone in addition to the sealing system used by the manufacturer. Pipe size should be increased to 4" using this method.

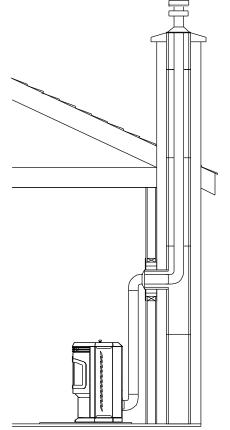


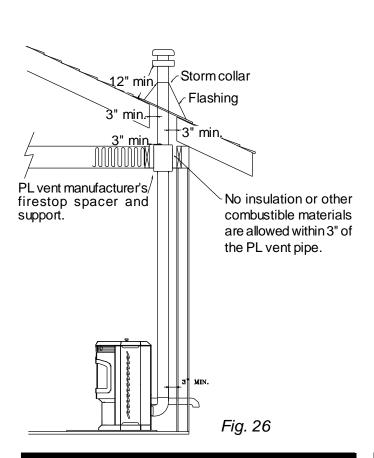
Fig.25

### #6 Installing into an existing chimney ( US and Canada )

This method provides excellent venting for normal operation. This method also provides natural draft in the event of a power failure.

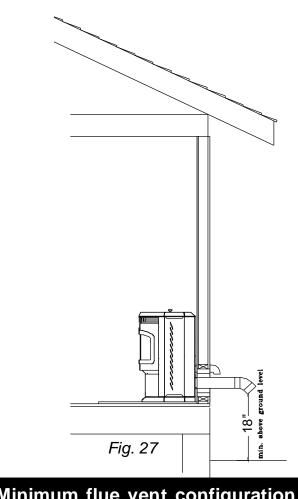
In Canada and some places in the US it is required that the vent pipe extend all the way to the top of the chimney. The pipe or liner inside the chimney should be 4"diameter.

In this method a cap should also be installed on the chimney to keep out rain.



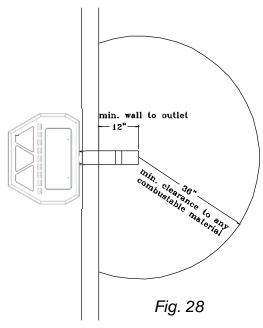
### #7 Installing through the ceiling vent

Through the ceiling vent, follow PL vent manufacturer's recommendations when using wall and ceiling pass through.



### Minimum flue vent configuration

It is recommended that outside air be installed with this venting configuration.



### Requirements for Terminating the Venting

WARNING: Venting terminals must not be recessed into a wall or siding.

NOTE: Only PL vent pipe wall pass-throughs and fire stops should be used when venting through combustible materials.

NOTE: Always take into consideration the effect the prevailing wind direction or other wind currents will cause with flyash and /or smoke when placing the termination.

### In addition, the following must be observed:

- A. The clearance above grade must be a minimum of 18".1
- B. The clearance to a window or door that may be opened must be a minimum of 48" to the side, 48" below the window/door, and 12" above the window/ door.1

### (with outside air installed, 18")

- C. A 12" clearance to a permanently closed window is recommended to prevent condensation on the window.
- D. The vertical clearance to a ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal must be a minimum of 18".
- E. The clearance to an unventilated soffit must be a minimum of 12".
- center of pipe.
  - G. The clearance to an inside corner is 12".
- H. A vent must not be installed within 3 feet (90 (if in Canada) cm) above a gas meter/regulator assembly when measured from the horizontal center-line of the regulator.1

- I. The clearance to service regulator vent outlet must be a minimum of 6 feet.1
- J. The clearance to a non-mechanical air supply inlet to the building or the combustion air inlet to any other appliance must be a minimum of 48".1
- K. The clearance to a mechanical air supply inlet must be a minimum of 10 feet.1

### (with outside air installed, 6 feet)

- L. The clearance above a paved sidewalk or a paved driveway located on public property must be a minimum of 7 feet.1,2
- M. The clearance under a veranda, porch, deck or balcony must be a minimum of 12 inches.1,3

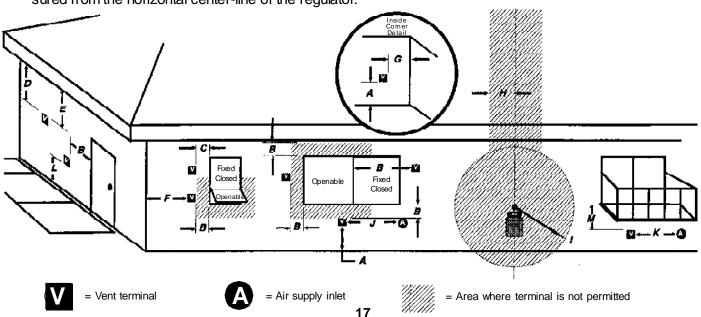
NOTE: The clearance to vegetation and other exterior combustibles such as mulch is 36" as measured from the center of the outlet or cap. This 36" radius continues to grade or a minimum of 7 feet below the outlet.

<sup>1</sup>Certain Canadian and or Local codes or regulations may require different clearances.

<sup>2</sup>A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings.

<sup>3</sup>Only permitted if veranda, porch, deck, or balcony is fully open on a minimum of 2 sides beneath the floor.

F. The clearance to an outside corner is 11" from NOTE: Where passage through a wall, or partition of combustible construction is desired, the installation shall conform to CAN/CSA-B365.



DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

INSTALL VENT AT CLEARANCES SPECIFIED BY THE MANUFACTURER

Mobile home installation should be done in accordance with the Manufactured Home and Safety Standard (HUD), CFR 3280, Part 24.

### **WARNING**

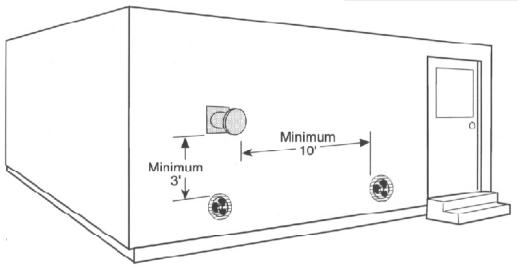
DO NOT INSTALL IN SLEEPING ROOM

### **CAUTION**

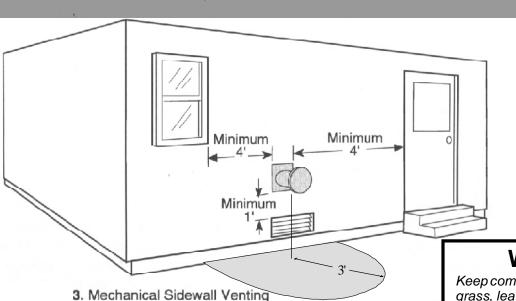
THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL, AND CEILING/ROOF MUST BE MAINTAINED.

### **CAUTION**

KEEP COMBUSTIBLES AWAY FROM FLUE OUTLET.



2. Mechanical Sidewall Venting

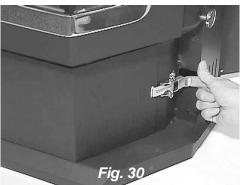


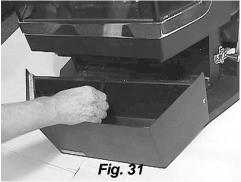
WARNING

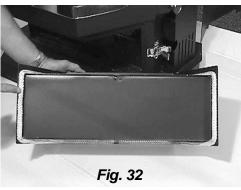
Keep combustible materials such as grass, leaves, etc. at least 3 feet away from the point directly under the vent termination.

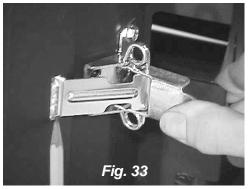
### **Maintenance - Emptying Ashes**











### Ash Pan Removal and Reattachment

### Figure 29

Open side doors.

### Figure 30

Release spring latches on the right and left side of the ash pan.

### Figure 31

Slide ash pan forward enough to lift with center handle. Empty ashes and reinstall ash pan.

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well awayfrom all combustible materials, pending final disposal. If ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

### Figure 32

Inspect the gasket rope for damage. Replace if necessary.

### Figure 33

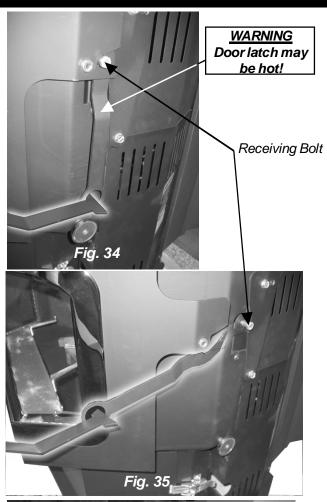
Insert spring latch front hooks into the ash pan side slots. Push both latches to the rear at the same time to latch.

### Soot and Fly Ash

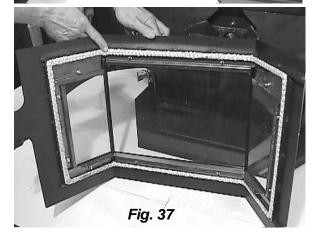
The products of combustion will contain small particles of fly ash. The fly ash will collect in the exhaust venting system and restrict the flow of the flue gases. Incomplete combustion, such as occurs during startup, shutdown, or incorrect operation of the room heater, will lead to some soot formation which will collect in the exhaust venting system. The exhaust venting system should be inspected at least once each year to determine if cleaning is necessary.

When removing the ash pan to empty ashes, you will note a build up of ash fines behind the ash pan. This space behind the ash pan was designed to allow the fines to fall out of the vertical heat exchangers and collect where they are easily cleaned out, rather than going into the flue pipe where it would be difficult to clean. These fines should not be allowed to build up. They may not allow the ash pan to be seated into its gasket properly. **NOTE:** If an extreme amount of force is required to snap the latch on one or both sides of the ash pan, the area behind the ash pan should be checked for ash fine build up.

### **Maintenance - Cleaning Glass on View Door**







### Opening and Closing the View Door Opening:

The view door must be opened for cleaning of the glass and scraping of the burn pot. This should be done with the unit off and cool, in most cases. Although the glass can be cleaned and burn pot scraped while the unit is at low burn.

- 1. Using scraper as shown in Fig. 34and 35, lift the door latch forward and up.
- 2. Swing the door open to the left, stopping the swing when resistance is felt. Forcing the door open further then was designed may cause damage to the door or it's hinges.

### **CAUTION**

Do not put excessive downward pressure on the latch end of the door while in the open position.

If the door is going to be opened for an extended period of time, it is suggested that it be removed (see Fig. 36) and set safely aside.

3. Inspect the door gasket and glass gaskets for worn or missing pieces. Replace if necessary. (Fig. 37)

### **Closing:**

When closing the door, always hold the door latch all the way up until it has caught the receiving bolt. Then push the latch downward and back until the door is fully seated. See Fig. 35.

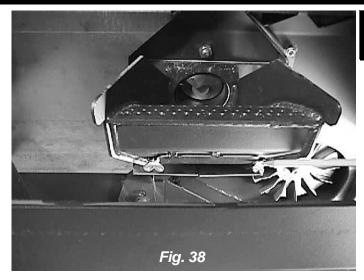
### **Removing View Door:**

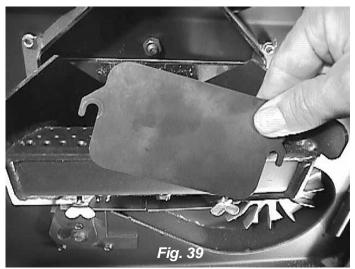
To remove the view door from the stove, hold the door by the bottom and lift upward off of the hinge pins. See Fig. 36.

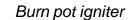
Inspect the door gasket. See Fig. 37.

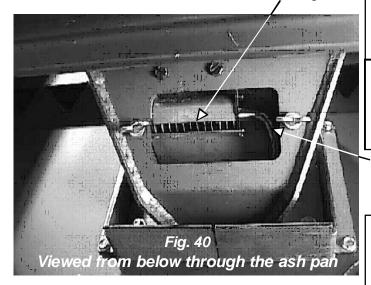
REPLACE GLASS WITH CERAMIC GLASS ONLY.

### **Maintenance - Burn Pot**









### Burn Pot Cleaning and Maintenance

- 1. Scrape the top holed surface and sides of the burn pot. (Fig 38) It is not necessary to completely remove all material from the burn pot. The excess will be pushed out during the next use.
- 2. Loosen the (2) wing thumb screws on the lower front angle of the burn pot. (Fig. 38)
- 3. Lift off the clean-out cover (Fig.39) to open the bottom clean-out chamber. (Fig.40)

### DANGER

Disconnect the power to the unit before removing cover.

4. Clean ash buildup from inside the chamber while cover is off. Use the scraper to tap on the top front edge of the burn pot. This will help knock pieces of ash, loosened by the scraping process, down through the holes. It also helps knock scale off of the igniter element.

### Figure 40

The igniter is made to be removable for service by insulated male/female wire connectors. These connections between the hot leads (the wires inside the burn pot) and the cold leads (the wires from the control board) are always pulled to the rear of the feeder body. (Not coiled inside the burn pot.)

It is very important that these connections are to the inside rear of the feeder body. Also, the extra wire of the igniter wire service loop must be pulled out through the rear of the feeder and tied up so that it will not be damaged by any moving parts. See page 25.

### **DANGER**

Disconnect the power to the unit before removing cover.

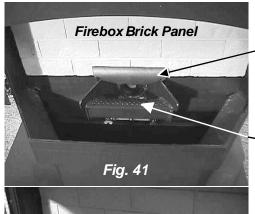
### Warning

Use caution when cleaning burn pot cleanout chamber. Do not damage the high temperature igniter wires.

Igniter hot lead wires (high temperature)

Note: The hot lead/cold lead connection must always be pulled to the rear of the feeder body before operation.

### Maintenance - Flame Guide and Brick Panel

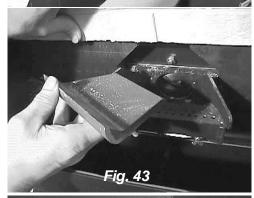


Flame Guide/ -Brick panel holder Flame Guide and Brick Panel Removal for Cleaning

Burn pot

### Figure 42

Slide brick panel straight upward with both hands.



g. 42

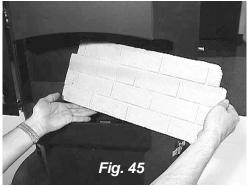
### Figure 43

While holding the brick panel up with one hand, remove the flame guide from the top of the burn pot.



### Figure 44

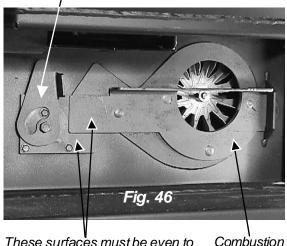
Slide the brick panel into the left corner of the firebox with the panel resting on the top edges of the burn pot. Rotate the right side of the brick panel through the door opening.



Reverse this operation to reinstall the brick panel after cleaning.

### **Maintenance - Combustion Intake Cover**

### Cover Retainer Handle



These surfaces must be even to close retainer handle.

Intake Cover

### Cleaning and Maintenance for the **Combustion Intake Cover**

You will need to remove the combustion intake cover to clean the fan blades and rear flue tube.

### Figure 46

Rotate the retainer cover handle counter-clockwise upward as far as it will go (approximately 90°).

### Figure 47

Hold the intake cover handle and pull until the side of the cover at the retainer handle end comes away from the stove body, approximately 15-20°, slide the right side tab out of the retaining slot.

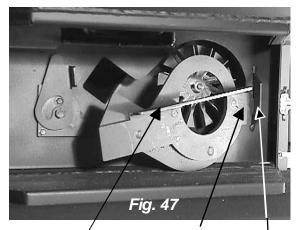


Clean and inspect the fully exposed combustion fan blade and flue tube.

Reinstall the combustion intake cover by Right Side Retaining Slot first sliding the right side tab into the retainer slot seen in Figure 47.

> Rotate the cover inward until the cover fits into its hole.

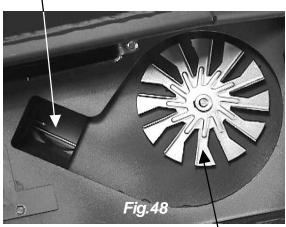
> Make sure the two faces (Fig.46) of the cover and retainer spacer are even and rotate the retainer handle clockwise until it stops.



Intake Covér Handle

Right Side Tab



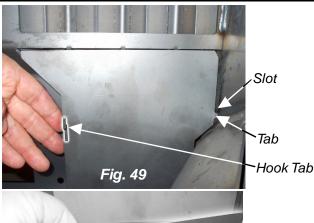


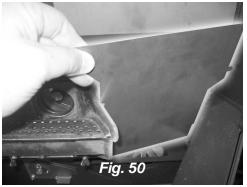
Combustion Fan Blade

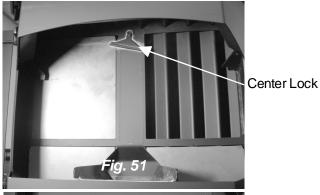
### **CAUTION**

**Excessive cleaning force could bend the** small stainless steel ESP Probe, causing damage.

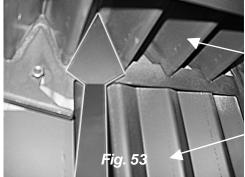
### **Maintenance - Heat Exchanger**











Center Lock

- Top Accordian Heat Exchangers
- Rear Firewall Heat Exchanger

### Cleaning the Heat Exchanger System

- 1. Remove brick panel and flame guide. See Pg 22.
- 2. Remove the ash pan. See Page 19.
- **3.** Remove flue baffles located on each side of the burnpot, see Fig. 49 & 50. The baffle is held in place by inserting the tab into the slot (located toward the outside of the firebox) and resting it on the hook tab located beside the burnpot.
- **4.** Pull the pointed end of the baffle slightly front with one hand while pushing up from below with the other hand. See Fig. 50.
- **5.** With the baffle released from the tabs, rotate the pointed end toward the door opening. Lift baffle up and out.

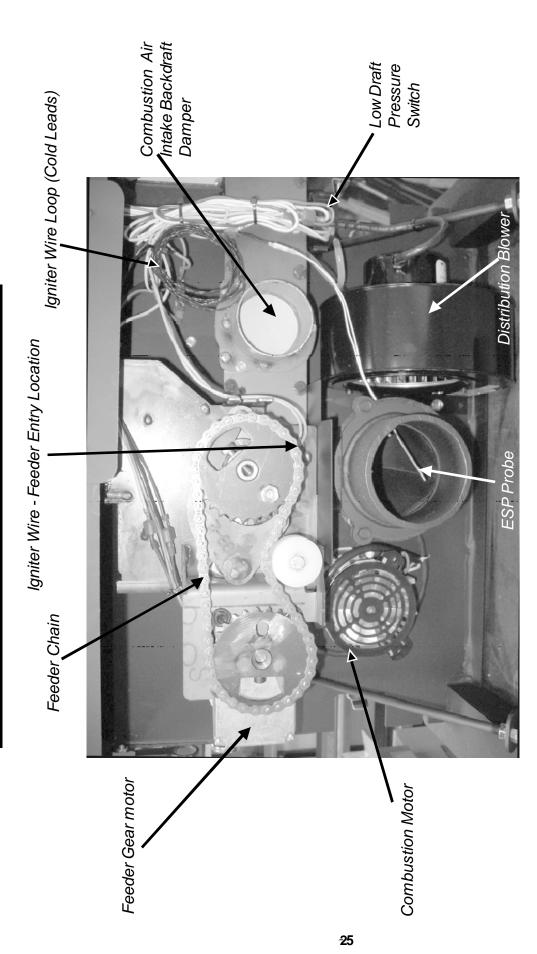
The right and left baffle are interchangeable.

**6.** Now remove the heat exchanger baffle plates. See Fig. 51 & 52. To remove the left plate, slide the center lock to the right. To remove the right plate, slide the center lock to the left. (The right and left plates are interchangeable.)

This will allow access to all of the rear vertical heat exchanger surfaces.

- **7.** With all four baffle plates removed, cleaning can be performed with the arrow end of the scraper. See Fig. 53.
- **8.** Scrape all of the heat exchanger surfaces. (Be sure to clean any internal ledges where fly ash could have collected.)

# Advance Motor & Component Locations



## Advance Pellet Stove Safety Devices

The **Combustion Motor Fuse** is a thermal overload one-time fuse link within the motor windings. Should the distribution motor fail with the unit operating over 80%, this fuse will protect the other components by melting off at a set temperature. With the fuse blown, the combustion motor will stop.In turn, the feeder motor will not operate and the stove will go out. This may only happen when the unit is on Maximum (#7 on the Temperature Dial, #6 on the Feed Adjuster and Distribution blower not operating). If this fuse does blow, the unit will need service.

The **Control Board/ESP** combination is responsible for all high limit safety control. There are 2 high limits, one normal operation high limit and one backup high limit. The control has an automatic diagnostic circuit that continuously monitors the ESP and Room Sensor for faults. If a fault should occur, the control sends a status alert and at the same time the unit goes down to minimum feed/minimum burn as a safety condition.

The Low Draft Pressure Switch is a differential pressure switch that senses the pressure between the firebox and the room. If the pressure becomes too low for proper combustion, the switch opens, cuttin power to the feeder motor and the igniter element. This switch is connected into the AC (high voltage) wires; therefore, the control may show the feeder motor and igniter lights "on" but they are not operating.

### **Trouble-Shooting**

### FEEDER DOES NOT FEED

- 1. No pellets in hopper.
- 2. Firebox draft may be too low for low draft pressure switch in feeder circuit to operate. **Check for closed doors**, loose or missing gasket on doors or hopper lid, faulty pressure switch.
- 3. Feed motor will not run until ESP senses 165 deg. F. Maybe you did not put enough pellets in the burn pot before lighting the fire.
- 4. Something is restricting flow in the hopper or causing the slide plate to stick.
- 5. Feed motor has failed.

### PARTIALLY BURNED PELLETS

- 1. Feed rate too high.
- 2. Draft too low. (Check burn pot clean out slide and door gasket).
- 3. Burn pot or heat exchanger may need to be cleaned.
- 4. Combination of all the above.
- 5. #6 status blink: A 6 blink control board status indication is caused by poor or incomplete combustion. The Advance Automatic Ignition circuit board has the ability to track the combustion through feed settings and ESP temperatures. When the control board has calculated poor or incomplete combustion it will shut down the unit as a safety feature. (Poor or incomplete combustion is a contributor of creosote which may cause a chimney fire)

A 6 blink status may be caused by several things:

- 1. Blocked or partially blocked flue.
- 2. Blocked or partially blocked inlet air.
- a. backdraft damper on the inlet pipe may be stuck closed.
- b. if outside air is installed the inlet cover may be blocked.
- 3. The air chamber under the burnpot may be filled with fines and small bits of ash.
- 4. The holes in the burnpot may be getting filled with ash or carbon buildup.
- 5. Combustion blower fan blades may need cleaned.
- 6. No fuel in hopper.

### **SMOKE SMELL**

Seal the vent pipe joints and connection to stove with silicone.

### **FIRE HAS GONE OUT**

- 1. No pellets in hopper.
- 2. Draft setting is too low.
- 3. Something is restricting fuel flow.

- 4. Feed motor or draft motor has failed.
- 5. Power failure or blown fuse.

### SMOKE IS VISIBLE COMING OUT OF VENT

- 1. Air-fuel ratio is too rich.
  - A. Feed rate too high.
  - B. Draft too low caused by a gasket leak.

### LOW HEAT OUTPUT

- 1. Feed rate too low
- 2. Draft too low because of gasket leak.
- 3. Poor quality or damp pellets
- 4. Combination of 1. and 2.

### **Helpful Hints**

### **Cleaning Burn Pot**

Whenever your stove is not burning, take the opportunity to scrape the burn pot to remove carbon buildup. A vacuum cleaner is handy to remove the residue. Be sure the stove is cold if you use a vacuum.

Carbon buildup can be scraped loose with the fire burning using the special tool provided with your stove. Scrape the floor and sides of the burn pot. The carbon will be pushed out by the incoming fuel. Always wear gloves to do this.

### **Removing Ashes**

Turn the Temp Dial to number 1 approximately 30 minutes before removing ashes. This will result in a cooler stove and ash pan.

Maximum Feed Adjuster settings are not needed in most cases. Operating in the normal range (#4) is recommended when maximum heat output is not required. The ESP probe prevents the stove from being over-fired.

Keep the stove free of dust and dirt.

### Fuel

Pellet fuels are put into 3 categories in terms of ash content. Premium at 1% or less, Standard at 3% or less and all others at 3% or more.

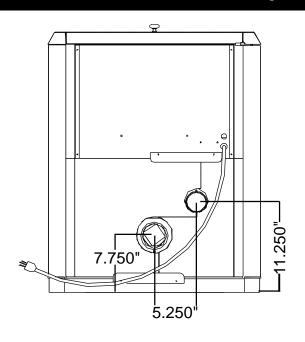
The Advance is capable of burning all 3 categories of pellets due to a patented feeder and burn pot system.

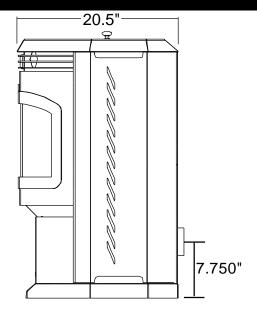
It should be noted, however, that higher ash content will require more frequent ash removal and may provide less BTU's per pound. Normally, standard and high ash pellets cost less than premium pellets and can be cost effective when burned in the Advance.

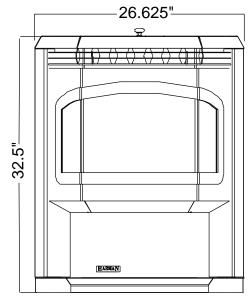
The moisture content must not exceed 8%. Higher moisture will rob BTU's and may not burn properly.

Higher moisture content in the fuel may show as condensation on hopper lid and possibly form rust inside the hopper.

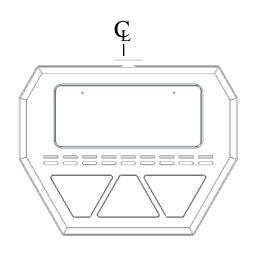
### **Specifications**







Weight



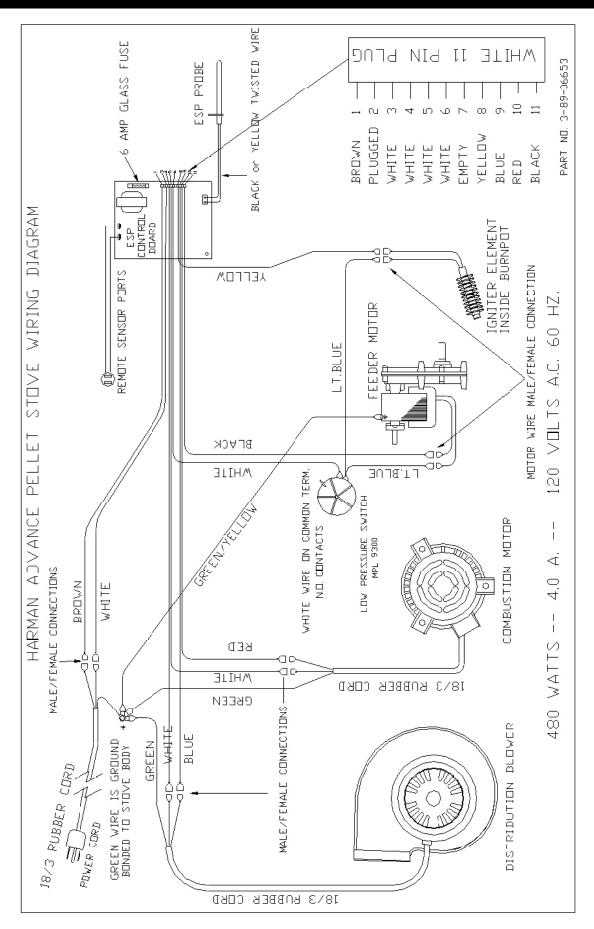
Blower
Hopper Capacity
Fuel
Outside Air Size
Fuse Rating
BTU Range
Feed Rate

Flue Size Maximum Wattage Start Cycle Wattage Normal Run Wattage 250 lbs. 135 cfm 60 lbs. Wood Pellets 2 3/8 inches 6 amp 0 to 48,000

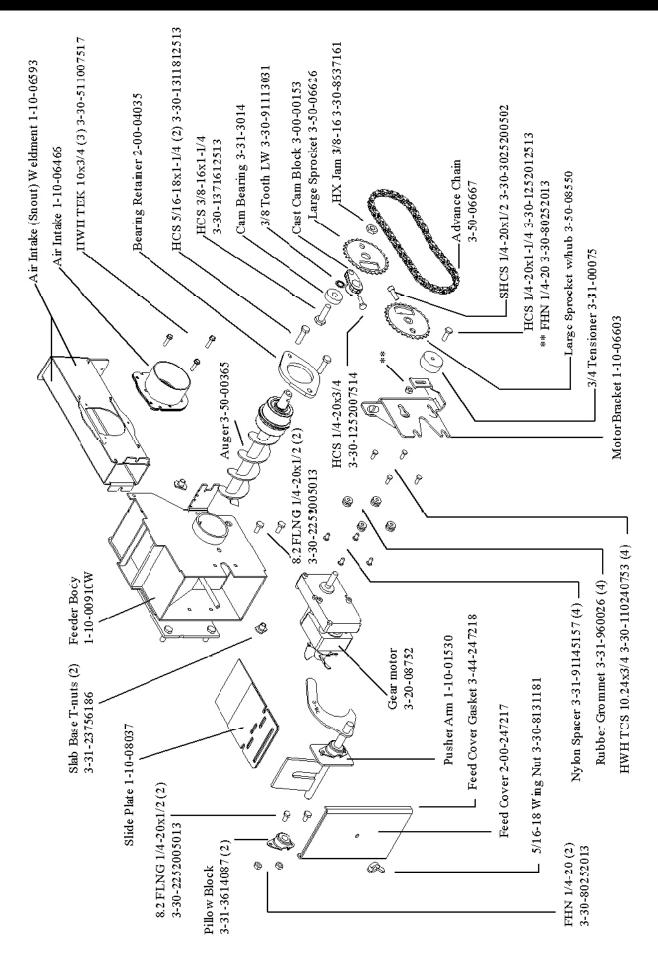
1.0 lbs./hr. on minimum6 lbs./ hr. on maximum3 inch Pellet Vent Pipe480 Watts (Start cycle and test)

340 Watts 275 Watts

### **Advance Wiring Diagram**



### **Advance Feeder Assembly**



### **Advance Parts List**

	<u>Description</u>	Part Number	
	Hopper Gasket (6')	3-44-375501	
	Left Side Door Assembly	2-00-06610-1	
	Right Side Door Assembly	2-00-06610-2	
	Igniter Element Assembly	1-10-06620	
	Wiring Harness Assembly	3-20-08727	
	Burn Pot Weldment	1-10-08736	
	Right Rear Shield	2-00-06616	
	Left Rear Shield	2-00-06617	
	Flue Baffle (2)	2-00-06632	
	Arrow Scraper	2-00-773850	
	Flame Guide	3-00-06644	
	Thermister Probe	3-20-00744	
	Room Sensor	3-20-00906	
	Circuit Board	3-20-05374	
	3" White CCW Fan Blade	3-20-08789	
	Differential Switch	3-20-9301	
	4-3/4" Single Fan Blade	3-21-00661	
	Combustion Blower	3-21-08639	
	Distribution Blower	3-21-22647	
	Spring Latches (2)	3-31-00927	
	White/Black Control Knob	3-31-605	
	Control Knob Shaft		
		3-31-015	
	Round Magnet (4)	3-31-08569	
	Brick Panel	3-00-06641	
	Front Glass	3-40-08728	
	Side Glass (2)	3-40-08729	
	Hopper Lid Knob	3-43-02000	4 Disciplinated 5)
	View Door Frame	3-43-06613 (Gold -4, Black Nickel -5)	
	Grill	•	-4, Black Nickel -5)
	Glass Divider Trim - Black only (2)	3-43-08754	
	Burn Pot Gasket	3-44-00409	
	3/8" Rope for Ash Pan Assembly (5')	3-44-00888	
	Tailpipe Gasket	3-44-06179	
	Black Glass Gasket (6')	3-44-2312	
	Tadpole Rope for View Door (1)	2-00-71611	
	Wiring Diagram	3-89-06653	
	Control Panel Sticker	3-90-06655A	
	Owner's Manual	3-90-09730	
	Hopper Lid Label	3-90-09416	
	Combustion Intake Weldment	1-10-07574	
	Ash Pan Assembly	1-10-07581	
	Ball Plunger	3-31-5500	
	Hopper Lid Glass	3-40-06693	
	Top Gasket (5')	3-44-375501	
	Combustion Blower Studs (3)	3-31-54383208	
Options:	Outside Air Assembly	1-10-08542	
	3' Flex Pipe	2-00-08543	
	5" Single Fan Blade for High Altitude	3-20-40985	
	3 Piece Ceramic Top Inserts	3-43-03000	
	45° Tailpipe Weldment	1-10-247129	See page 29 for
	30		Feeder Part Numbers

### **Harman Gold Warranty**

### HARMAN GOLD WARRANTY 6 YEAR TRANSFERABLE LIMITED WARRANTY (Residential) 1 YEAR LIMITED WARRANTY (Commercial)



Harman Stove Company warrants its products to be free from defects in material or workmanship, in normal use and service, for a period of 6 years from the date of sales invoice and for mechanical and electrical failures, in normal use and service, for a period of 3 years from the date of sales invoice.

If defective in material or workmanship, during the warranty period, Harman Stove Company will, at its option, repair or replace the product as described below.

The warranty above constitutes the entire warranty with respect to Harman Stove Company products. HARMAN STOVE COMPANY MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING "ANY" WARRANTY OF MERCHANTABILITY, OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. No employee, agent, dealer, or other person is authorized to give any warranty on behalf of Harman Stove Company. This warranty does not apply if the product has been altered in any way after leaving the factory. Harman Stove Company and its agents assume no liability for "resultant damages of any kind" arising from the use of its products. In addition, the manufacturer and its warranty administrator shall be held free and harmless from liability from damage to property related to the operation, proper or improper, of the equipment.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THESE WARRANTIES APPLY only if the device is installed and operated as recommended in the user's manual.

THESE WARRANTIES WILL NOT APPLY if abuse, accident, improper installation, negligence, or use beyond rated capacity causes damage.

HOW TO MAKE A CLAIM - Any claim under this warranty should be made to the dealer from whom this appliance was purchased. Then contact is made with manufacturer, giving the model and serial numbers, the date of purchase, your dealer's name and address, plus a simple explanation of the nature of the defect. Extra costs such as mileage and overtime are not covered. Nuisance calls are not covered by these warranties.

THIS WARRANTY IS LIMITED TO DEFECTIVE PARTS - REPAIR AND/OR REPLACEMENT AT HARMAN STOVE COMPANY'S OPTION AND EXCLUDES ANY INCIDENTAL AND CONSEQUENTIAL DAMAGES CONNECTED THEREWITH.

WARRANTY EXCLUSIONS: Failure due, but not limited to, fire, lightning, acts of God, power failures and/or surges, rust, corrosion and venting problems are not covered. Damage and/or repairs including but not limited to; remote controls, filters, fuses, knobs, glass, ceramic brick panels, ceramic fiber afterburners, door packing, tile, ceramic log sets, paint, batteries or battery back-up and related duct work are not covered. Also excluded from this warranty are consumable or normal wear items including but not limited to; flame guides, grates, coal bars, afterburner hoods, fire brick, gaskets. Additional exclusions for corn stoves are burnpot housing weldment, burnpot grate weldment (pellet or corn), burnpot front plate (pellet or corn), burnpot front plate lock, corn auger extension, ceramic insert, and ceramic insert plate. Additional or unusual utility bills incurred due to any malfunction or defect in equipment and the labor cost of gaining access to or removal of a unit that requires special tools or equipment are not covered. Maintenance needed to keep the stove in "good operating condition" is not covered. This includes, but is not limited to, cleaning, adjustment of customer controls and customer education. Labor, materials, expenses and/or equipment needed to comply with law and/or regulations set forth by any governmental agencies are not covered.

This Warranty provides specific legal rights and the consumer may have other rights that vary from state to state.

In the event of change in ownership, the remaining portion of this warranty may be transferred to the new owner by sending the new owner information and a transfer fee of \$25.00 US to the Harman Stove Company.

PLEASE READ THE LITERATURE BY THE MANUFACTURER FOR THE VARIOUS ACCESSORY DEVICES. THE MANUFACTURER WARRANTS THESE ACCESSORY DEVICES, NOT HARMAN STOVE COMPANY OR THEIR WARRANTY ADMINISTRATOR. FURTHERMORE, THESE ACCESSORY DEVICES MUST BE INSTALLED AND USED ACCORDING TO THE RECOMMENDATIONS OF THE MANUFACTURER.

REMEDIES - The remedies set forth herein are exclusive and the liability of seller with respect to any contract or sale or anything done in connection therewith, whether in Contract, in tort, under any warranty, or otherwise, shall not, except as herein expressly provided, exceed the price of the equipment or part of which such liability is based.

CLARIFY - The above represents the complete warranty, which is given in connection with stoves, manufactured by Harman Stove Company. No other commitments, verbal or otherwise, shall apply except by a written addendum to this warranty.